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Alectopsylla unisetosa nov. gen., nov. spec. (Siphonaptera, Ischnopsyllidae) from Argentina

by

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With 7 figures

SUMMARY

A new genus and species of bat flea is described from the Chubut province, Argentina, based on specimens found on *Myotis* aff. *levis* (Geoffr.). The affinities with related genera belonging to the subfamily Ischnopsyllinae are discussed.

In a jar containing 40 specimens of *Myotis* aff. *levis* (Geoffr.) from El Hoyo (Chubut, Argentina), sent by Mr. A. Kovacs to the Museum of Natural History of Geneva, the author found 47 specimens of a bat flea which proved to represent an undescribed genus and species.

Alectopsylla nov. gen.

Separable from other genera without a submarginal pale band on the frons by the combination of the following characters: upper part of frontal region with slender setae; eye quite well developed; pleural rod of mesothorax present; ventral end of pronotal ctenidium not curved forwards; metanotum and terga I-V each with a ctenidium; all tarsi normally with only one stout seta between the members of the basal pair of lateral plantar setae.

Derivatio nominis: named after Alecto, one of the Greek Erinyes.

Head fracticipit, longer than high; frons lacking pale lunate area, dorsal area of frons not rugulose, upper part of frontal region with slender setae; tentorial arch present in front of quite well developed eye; genal process broadly truncate; the two genal spines fairly obtuse, the second clearly longer than the first; labrum without pseudosetae; maxillary stipes with a long, acute apex. Ventral end of pronotal ctenidium not curved forwards; mesothoracic pleural ridge junction quite rigid, mesothorax with a pleural rod attached posterad of middle of sclerotic dome; metepimeron not higher than long, without a ctenidium, but with a stout marginal bristle; ctenidia on pronotum, metanotum and terga I-V; tergum VII with a single well-developed antesensilial seta each side; basal abdominal sternum with one or two ventral setae each side, its striation forming a fingerprint pattern (more distinct in female than in male); 1st hind tarsomere 2,3x (♀) to 2,5-2,6x (♂) length of distitarsomere, not especially hairy; 2nd mid tarsomere a little less than 4/5 length of 1st; distitarsomeres with usually one stout seta between the basal pair members of lateral plantar setae; normally 4 pairs of lateral plantar setae.

Alectopsylla unisetosa n. sp. (figs. 1-7)

Type material: ♂ holotype, ♀ allotype, 17 ♂ 28 ♀ paratypes, from El Hoyo de Epuyen, 12 km south of El Bolson, appr. 42° 10′ S, 71° 21′ W, prov. Chubut, Argentina, on *Myotis* aff. *levis* (Geoffr.), 19.XII.1975, lg. A. Kovacs; holotype, allotype and 14 ♂ 25 ♀ paratypes Mus. Geneva, 3 ♂ 3 ♀ paratypes British Museum Nat. Hist. Holotype, allotype and 7♂, 7♀ paratypes mounted on slides, the others preserved in alcool.

The above description of the monotypic genus is also diagnostic of the new species.

Head (fig. 1): Fracticipit, anterior wall of frons rather thin and of uniform thickness throughout; submarginal row of about 10 setae, curving away from margin in upper third; one long seta just above anterior genal spine; one large ocular seta placed obliquely above eye and between it and dorsal margin of frons one to three slender setae (sometimes between eye and ocular seta one accessory fairly stout seta); a number of small setae scattered over the lateral surface and normally one long seta in middle of lateral surface (absent in a few specimens); the two genal spines fairly obtuse, the second one is a good

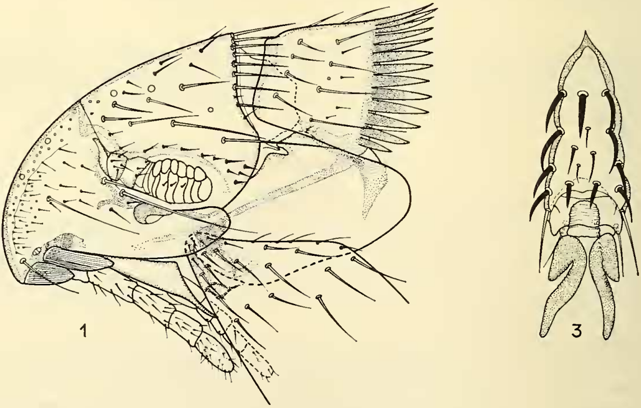

FIG. 1, 3.

Alectopsylla unisetosa n. sp., ♀ paratype; 1: head and prothorax. 3: hind distitarsomere.

deal longer than the first; genal process long and fairly broad, with a rounded apex; eye relatively very well developed; tentorial rod present in front of eye; setae of antennal pedicellus short in male (just reaching clava), longer in female (reaching to 4th segment of clava); clava much longer in male than in female (reaching posterior margin of occiput); three oblique rows of setae on postantennal region of head and one along the posterior margin, one large seta in the lower third, a group of short setae behind antennal fossa (lacking sometimes in male). Apex of maxillary and of five-unit labial palps nearly reaching middle of fore coxa; labrum without spicules; maxillary stipes with a long acute apex.

Thorax : Pronotum (fig. 1) large, with two rows of setae (five or six in each row each side); pronotal ctenidium with 25-32 sharply pointed spines; cervical link-sclerite a little longer in male than in female and lodged in a sinus of the prosternosome; mesonotum (fig. 2) with about 8 pseudosetae laterally each side under the collar, mesosternosome with about 12 setae. Metanotum with a main row of five setae, preceded by 8 to 10 smaller ones forming one or two irregular rows, lateral metanotal region with one long and two smaller setae; metanotal ctenidium of 23-28 spines; metepisternum with one large seta, metapimeron with 5-8 setae one of which marginal (as e.g. in *Serendipsylla*, *Ptilopsylla*, *Rothschildopsylla* or *Hormopsylla*); inner sclerotizations as in fig. 2; pleural rod apically bifid.

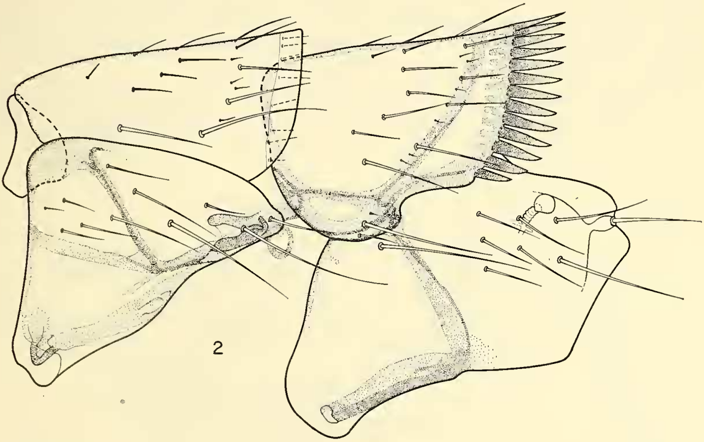

FIG. 2.

Alectopsylla unisetosa n. sp., ♀ paratype; meso- and metathorax.

Legs : Fore coxa basally with a cluster of short setae, one strong seta at the posterior margin in the lower half. Mid and hind coxa with setae along anterior margin and a few small ones apico-laterally on outer side. Femora on outer side with a few setae in apical half, a number along dorsal margin the most apical of which is stout and curved, and one to six at ventral margin near base. Tibiae with seven to eight setae-bearing notches on dorso-posterior margin; a regular row of about 8-10 setae on outer surface of tibiae; none of the tarsal setae reaches beyond apex of following tarsomere. Distitarsomere (fig. 3) of all legs normally with 4 pairs of lateral plantar setae, one pair of similar, but shorter setae subapically between the members of the fourth pair; basally normally only one single stout plantar seta between the members of the first pair (2 ♀ have two plantar setae between the members of the first pair on the left hind tarsus only; in one ♀ the hind tarsus bears only three pairs of lateral plantar setae, the single plantar seta between the members of the 2nd pair). Only a few thin setae on the plantar surface; ungues well developed.

Abdomen: Main row of setae on terga I-VII with 5,6-7, 6-7, 6,5-6, 5, 4-5 setae respectively, one to three (one long and one or two short ones) setae below level of spiracle on terga II-VII. Terga I-V with developed ctenidia of respectively 20-26, 19-26, 17-25, 15-22, 9-17 spines, 1 male with one spinelet on tergum VI. Tergum VII with one large antesensilial seta each side flanked by one or two minute ones; spiracular fossa of terga II-VII round. Sternum II with only one or two ventral setae each side, its striation forming a fingerprint pattern (more distinct and denser in female than in male). Sterna III-VI with a main row of three to six setae each side.

Genitalia : Male : see figure 5; clasper a little longer than high, one long acetabular seta at posterior margin; movable process (fig. 6) short, hardly reaching beyond fixed

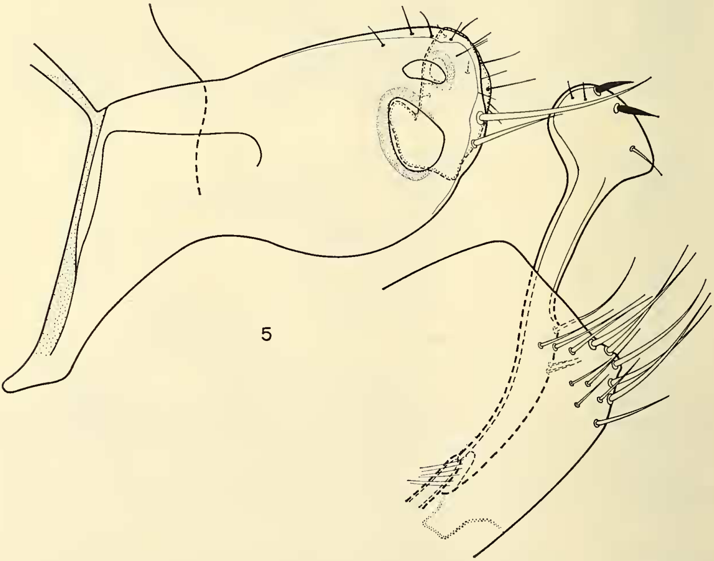

FIG. 5.
Alectopsylla unisetosa n. sp., ♂ holotype, paramere.

process, with a slight apico-anterior angle; apex of distal arm of sternum IX club-like, with a quadrangular head bearing two stout and a few small setae apically. Phallosome (fig. 7): dorsal margin of the large aedeagal apodeme convex, crochets not divided, clearly tapering to a rounded apex.

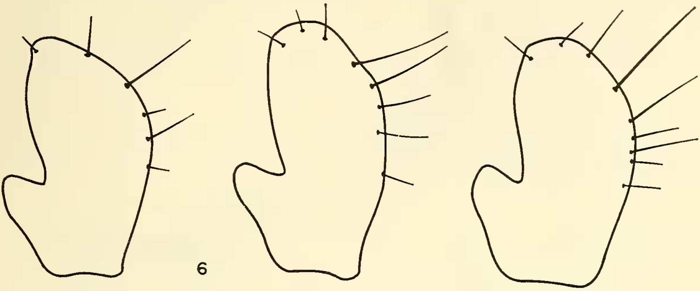

FIG. 6.

Alectopsylla unisetosa n. sp., variation in shape of the movable process.

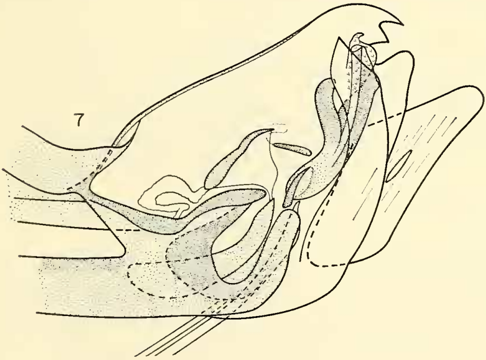

FIG. 7.

Alectopsylla unisetosa n. sp., ♂ holotype, distal end of phallosome.

Female: Sternum VII (fig. 4) with 7-9 setae placed in an irregular row, posterior margin with a large rectangular dorsal lobe, its posterior margin very slightly sinuate, slightly sclerotized and striated, followed by a large, deep sinus and a very narrow ventral lobe. Chaetotaxy of tergum VIII as in figure 4. Sternum VIII small and asetose; sensilium with about 20 trichobothria each side. Anal stylet more than twice as long as basally broad, with one apical and one slender and one or two minute subapical seta. Anal tergum with one long and a few small setae, anal sternum with a number of medium-sized and two stout setae. Basal part of ductus bursae sharply sigmoid, the ducts leading from it hardly visible; apex of duplicatura vaginalis pointing dorsad. Spermatheca with a subglobular bulga and a fairly long hilla.

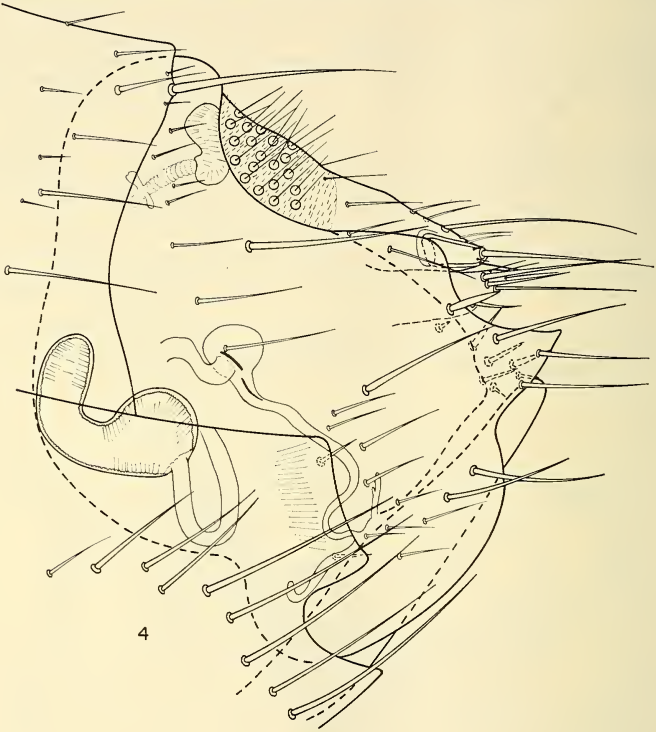

Fig. 4.

Alectopsylla unisetosa n. sp., terminalia of ♀ paratype.

The affinities of the new genus are quite obscure. Within the South American genera of the Ischnopsyllinae it is separated at once from *Myodopsylla* and *Sternopsylla* by the presence of developed ctenidia on metanotum and abdominal terga, from *Ptilopsylla* by the presence of a metanotal ctenidium. From *Rothschildopsylla* it may be separated by the number of tergal ctenidia and the absence of transversal incrassations of both terga and sterna. Finally, *Hormopsylla* is characterized by the subspiniform setae on the dorsal preantennal area of the head.

Key to the South American genera of Ischnopsyllinae based on Johnson (1957) and Hopkins & Rothschild (1956)

1 Metanotum and first abdominal tergum lacking developed ctenidia 2

1* Either or both metanotum and first abdominal tergum with developed ctenidia 3

2 Metanotum and first abdominal tergum with a row of close-set apical bristles forming a false comb; frons with pale lunate area . . . . *Myodopsylla* Jordan & Rothschild

2* Metanotum and first abdominal tergum lacking false combs; frons lacking pale lunate area . . . . *Sternopsylla* Jordan & Rothschild

3 Both metanotum and first abdominal tergum with developed combs 4

3* Metanotum lacking developed comb; mesopleural rod incomplete, sternum VIII of male highly modified . . . . *Ptilopsylla* Jordan & Rothschild

4 Frons with only small thin bristles 5

4* Frons with numerous spiniform bristles; ventral end of pronotal comb strongly curved forwards . . . . *Hormopsylla* Jordan & Rothschild

5 Ctenidia present only on abdominal terga I and II; segment I of hind tarsus at most twice length of V; abdomen ventrally with conspicous band-like sclerotizations . . . . *Rothschildopsylla* Guimarães

5* Ctenidia present on terga I-V; segment I of hind tarsus more than twice length of V; abdomen ventrally without sclerotizations . . . . . *Alectopsylla* nov. gen.

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RÉSUMÉ

Le nouveau genre *Alectopsylla* (espèce type: *A. unisetosa* n. sp.) parasite de la chauve-souris *Myotis* aff. *levis* (Geoffr.) est décrit provenant de la province Chubut en Argentine. Ses affinités avec les genres voisins de la sous-famille Ischnopsyllinae sont discutés. Le nouveau genre est incorporé dans une clé d'identification des genres d'Amérique du Sud.

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